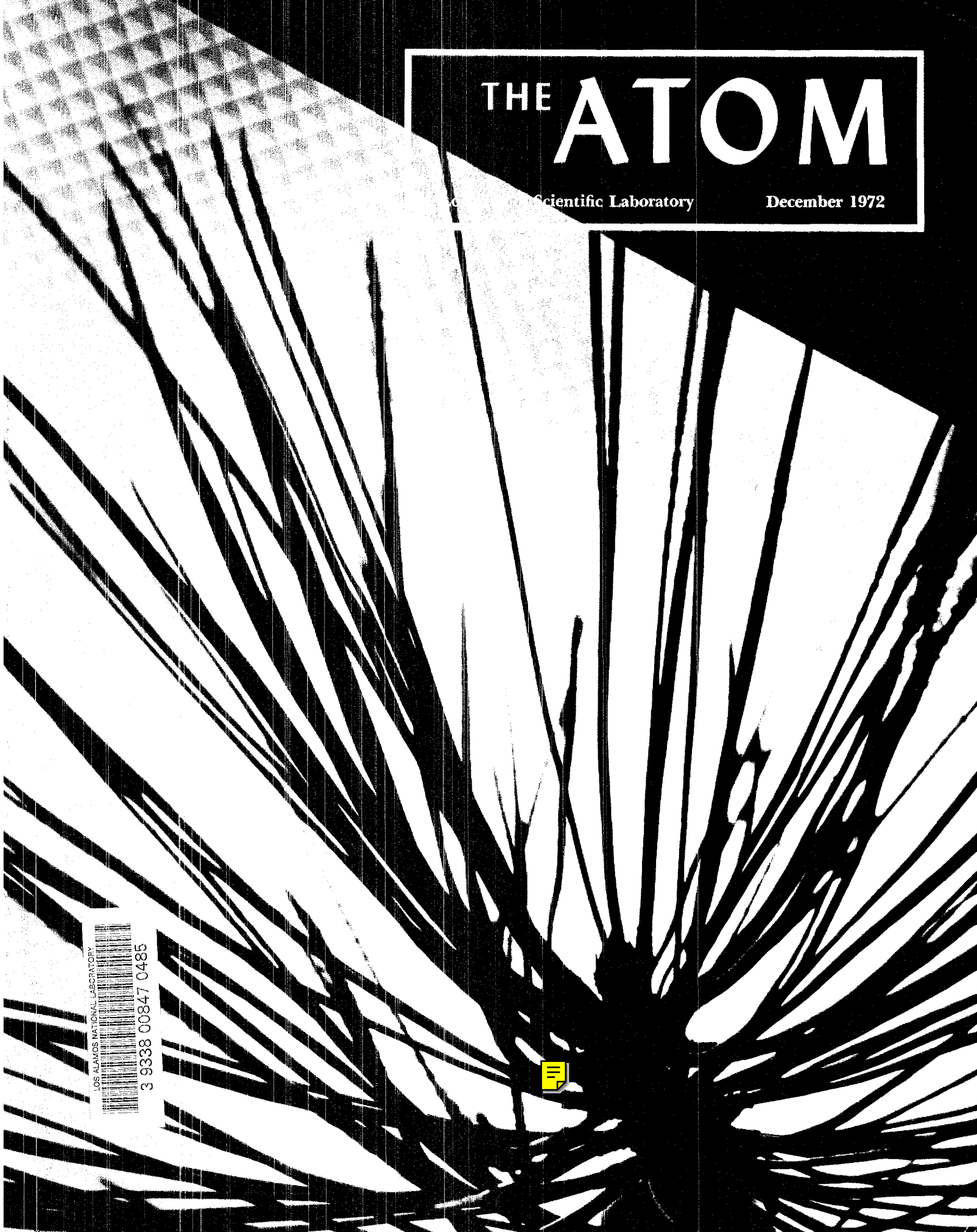
THE ATOM

Scientific Laboratory

December 1972



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THE ATOM

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CONTENTS:

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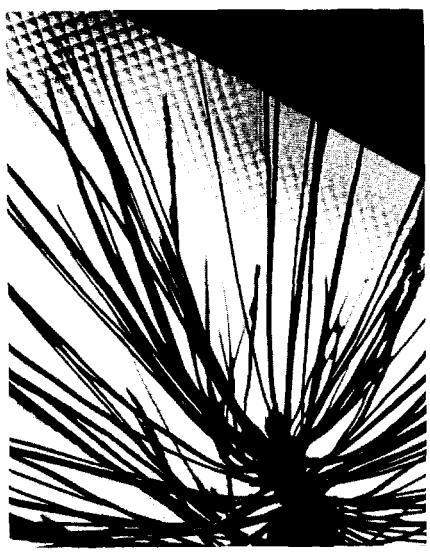


COVER:
This month's cover photograph of pine needles, taken by ISD-7's Bill Jack Rodgers, is timely, not only because the trees, on which the needles grow, will decorate many homes in observance of Christmas, but, also, because rock salt is being used to deice streets in many American communities. To understand the connection, read the story "Pine Trees and Rock Salt" which begins on page one.

Rock Salt and Pine Trees

Howard Menlove collects needles from a diseased pine tree on Diamond Drive in Los Alamos. Menlove links the killing of pine trees to the use of rock salt to deice streets.

One of the most controversial winter-time topics of conversation is rock salt, which is used in many communities across the country to melt snow and ice from streets. The objective is to reduce the hazards of winter driving. While it may do this, many environmentalists oppose the use of rock salt and are quick to point to studies which show that it has some adverse effects on local ecology.

Several studies have been conducted on the effects of salt on soil, ground water and some types of vegetation. One of the most recent of these, conducted by Howard Menlove of Group A-1 at the Los Alamos Scientific Laboratory, links rock salt to the killing of pine trees in the vicinity of roadways and drainage ditches in Los Alamos.

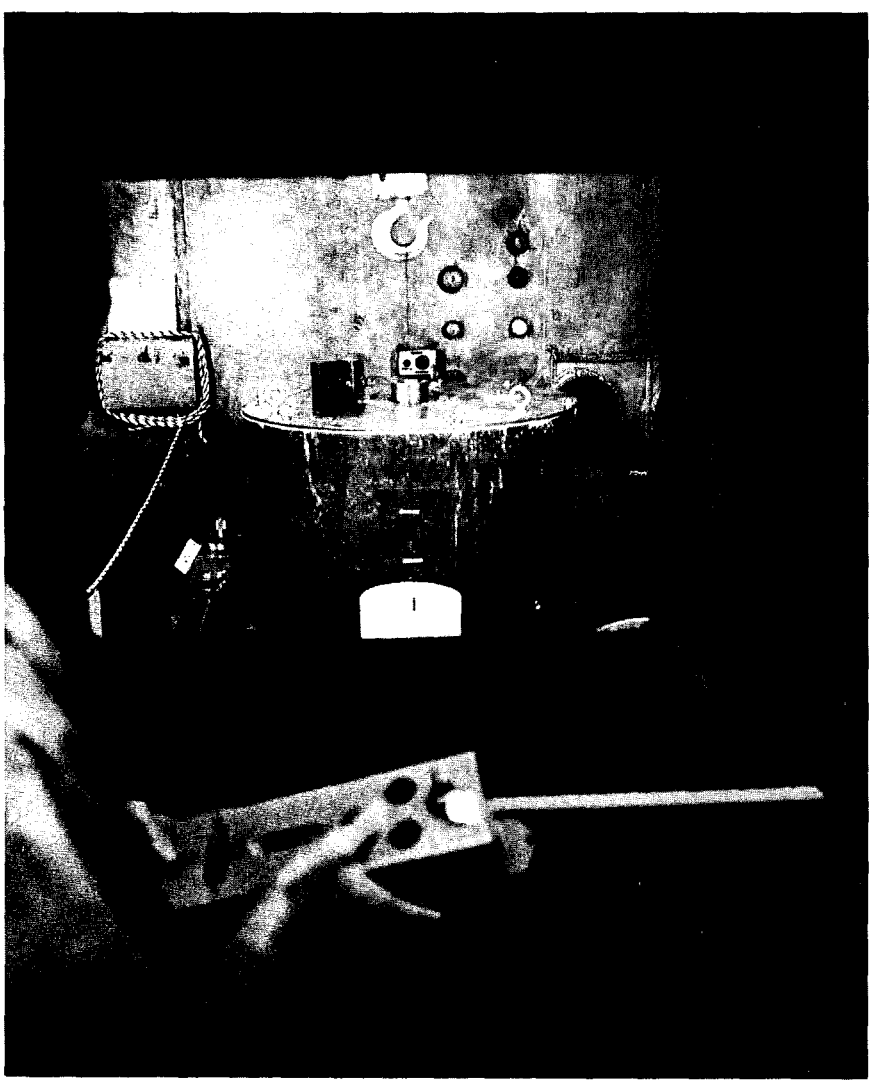
Menlove, a member of the New Mexico Citizens for Clean Air and Water, became interested in determining if there is a relationship between rock salt and diseased-appearing pine trees that he and others had observed along Los Alamos streets. A determination was easy for Menlove to do because it is related to the type of work done routinely in Group A-1. This is research and development of equipment and techniques for detecting and measuring amounts of various isotopes in unknown mixtures.

A request by Menlove to use existing Laboratory equipment during his own time to conduct the study was sanctioned by his group leader, Bob Keepin, and by Laboratory Director Harold Agnew.

The A-1 scientist collected pine needles from diseased trees in 53 different locations in the vicinity of streets and drainage ditches. He also collected pine needles from healthy trees in nearby areas, but away from streets and drainage areas, as control samples for comparison. Menlove noted that more than 2,000 diseased pine trees were

continued on page 3

Above, diseased pine needles studied by Menlove have brown tips and green midsections. Their bases appear to be normal. A dark band separates tip and midsection colors.



From outside a hot cell, Menlove uses a remote control system to raise the californium-252 source out of the large shielded container, background, and to lower the source into the holder where it activates surrounding samples.

Left, Menlove places vials, containing pine needles, in a holder. The vials are placed into a series of holes which ring a larger hole. The holder's cap, standing on edge, has a single hole, aligned with the one in the center of the holder, through which the californium-252 source is lowered to activate the samples.

counted in the sampled locations in Los Alamos.

The pine needles were oven dried to reduce their moisture content and then activated with neutrons from a californium-252 source. The activated pine needles emit gamma rays whose energies are indicative of the isotopes emitting them.

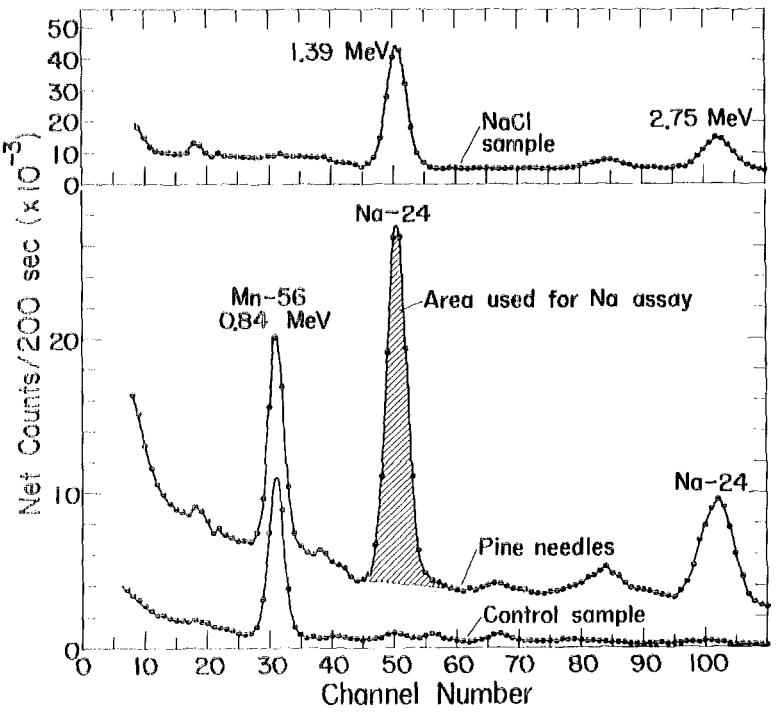
With sodium-iodide crystal and germanium-lithium detectors, Menlove measured the sodium concentrations in both the diseased and control pine needles. The average sodium content in samples from the diseased trees was 50 times greater than in the control samples.

To verify that salt (NaCl) was the origin of the sodium found in the samples, Menlove also measured the chlorine content in several of the diseased pine needles and found that the number of chlorine atoms equaled the number of sodium atoms.

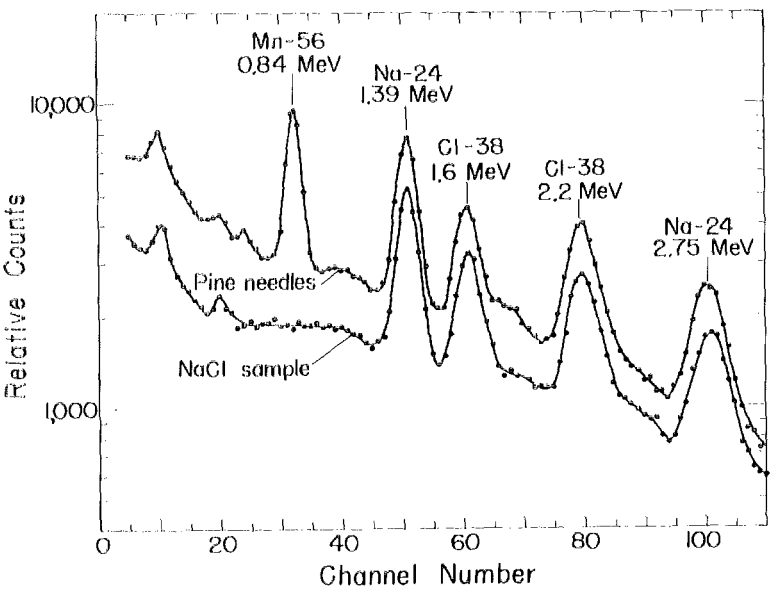
To further establish that sodium-chloride concentrations measured originated with rock salt, the scientist collected samples from opposite sides of the same tree located near a road. The salt content of pine needles taken from branches on the road side of the tree was five times greater than those taken from the opposite side.

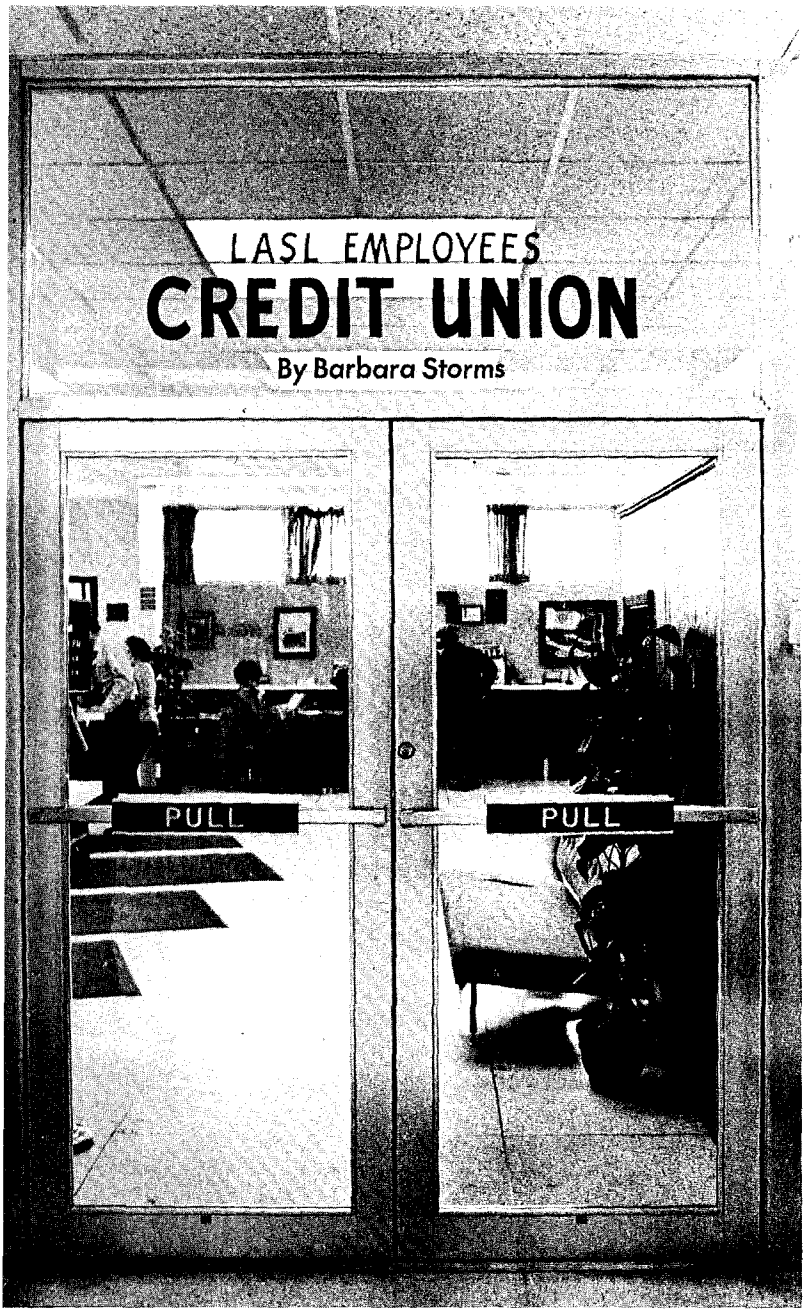
"The diseased pine needles have brown tips, green midsections and their bases appear to be normal," Menlove said. "The largest concentration of salt is found in the brown tips."

The scientist said that 100 per cent of the diseased pine trees had abnormally high salt contents as compared with the healthy control trees. The diseased trees are especially numerous along Canyon Road, Diamond Drive and Urban Street, he concluded.



Tracing above shows the correlation of analytical results after simultaneous activitation of ordinary table salt (NaCl), pine needles from diseased trees and pine needles from control trees. The focal point is the shaded area. It shows the high sodium content in diseased needles. The sodium content in the control sample is negligible. Below, tracing shows that sodium and chlorine content in diseased pine needles and ordinary table salt are similar.





In 1954 a small group of far-sighted Los Alamos Scientific Laboratory employees got together, threw in $5 apiece and started a credit union. Now, eighteen years later, the LASL Employees Credit Union has nearly 9,000 members, and its assets exceed $17 million.

In terms of assets, which are increasing at the rate of $3.5 million to $4 million a year, the credit union ranks 95th among the nation's 12,000 state-chartered credit unions.

"It just snowballs," said Manager Walter Sullins. "The bigger we get, the faster we grow. It's getting to the point where we're almost afraid to predict where we'll be a month or a year from now."

This is not to say that the credit union management, both paid and volunteer, has not been expert at looking ahead, even from the beginning. "The ability to foresee the needs of the community and to meet them, even when they looked like a bad risk to everyone else, is the key to the success of this credit union," Sullins asserted.

When Austin Burch, Joe Weldon, Robert Meier, Frank Barylski and Harlan Morris gathered for the credit union's first board meeting Nov. 9, 1954, Los Alamos was a one-industry town still locked behind a fence. The only bank was a branch facility.

By the end of the first month of business the credit union had 54 members and assets of $1,160 and had made loans amounting to $300. Assets doubled each year, and Dec. 17, 1958, the one millionth dollar was deposited by Willard Gettemy. In Jan., 1959, the credit union hired Wayne Mahannae as its first full-time manager, and the credit union did business in space provided by the Laboratory in the old AP building beside Ashley Pond. The first Supervisory Committee included Claude Blatti, Eugene Weiss and Richard Gotti. A branch office was opened in Las Vegas in 1964 to serve LASL employees at the Nevada Test Site. Although personnel in Nevada have dwindled to about 25, the branch still operates under the management of Bob Beiler.

In 1959 with the opening of Barranca Mesa for the first private homes, the imminent development of White Rock and talk of disposal of government housing by the AEC, the credit union offered its first major service to the community by making funds available for construction loans.

Other banking institutions in the area still looked upon Los Alamos as a temporary boom town, and available loans carried high interest

rates. Two Santa Fe banks had some $600,000 earmarked for FHA-guaranteed loans. This money, however, was for buying a home, not constructing one. The credit union had the only money available for construction loans.

In 1961, as construction and disposal progressed, the LASL Employees Credit Union became the first credit union in the country authorized to make long-term FHA mortgage loans, and it continued to offer them until disposal was nearly complete in 1967.

A recent surge in demand has caused the number of credit union real-estate loans to double over the past year and prompted the formation of a Real-Estate Division, which will be expanded when new office space is acquired.

"We went into 20-year loans in August and will probably have a million dollars worth by the end of the year," Sullins said. "But we just don't have the capacity to handle the volume needed to serve Los Alamos."

To alleviate this problem the credit union will resume FHA-insured loans in January or February and will discount them to the Federal National Mortgage Association.

"By processing the FHA loans and then selling them, we'll be able to meet the tremendous demand, offer better service and not keep such a large percentage of our assets tied up in long-term loans," Sullins explained.

The LASL Employees Credit Union is the first credit union ever to be accepted by the Federal National Mortgage Association for this type of service.

The credit union is owned and operated by its membership, which is open to any LASL employee or member of his family for the price of a $5 share and a 25-cent entry fee. A share-account savings programs can be continued with the purchase, at any time, of any amount of shares for which the credit union is currently paying 6 per cent interest, the maximum permissible by

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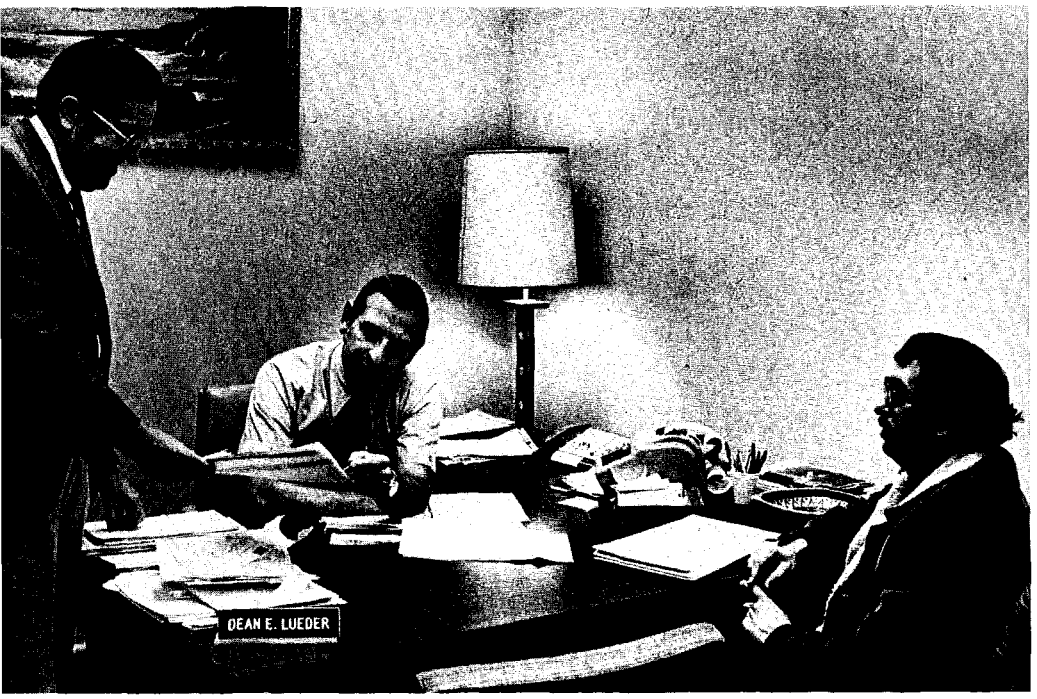
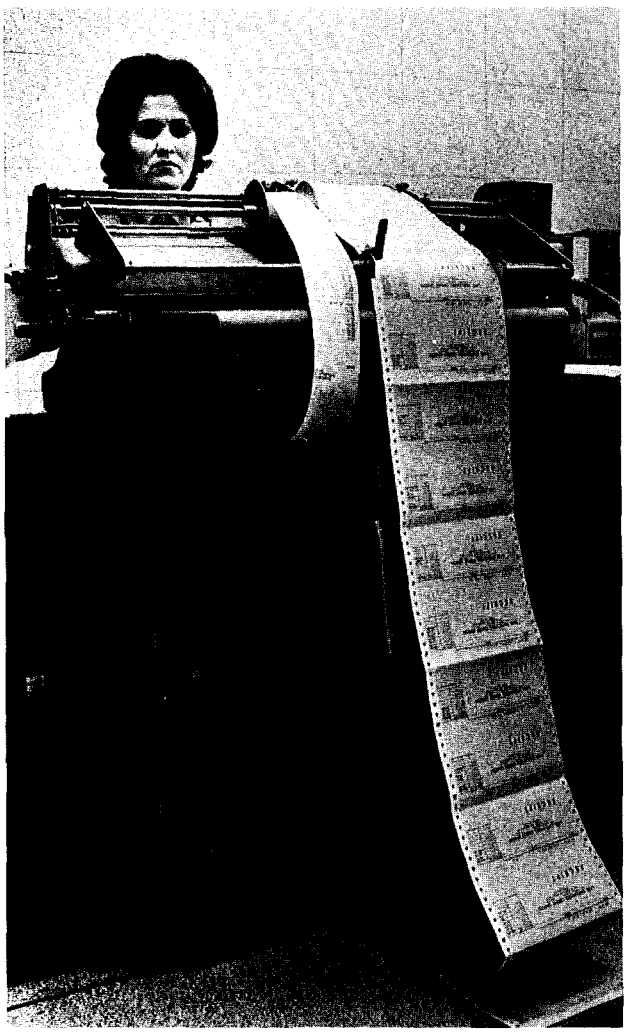
On a LASL payday, credit union cashiers are exceptionally busy.



LASL Employees Credit Union Manager Walt Sullins discusses loan statistics with Loan Officer Dean Lueder. At right is Bennie Trujillo, MP-6, a member of the credit union.



Computer Operator Celia Herrera prepares receipts that will be mailed to credit union members.

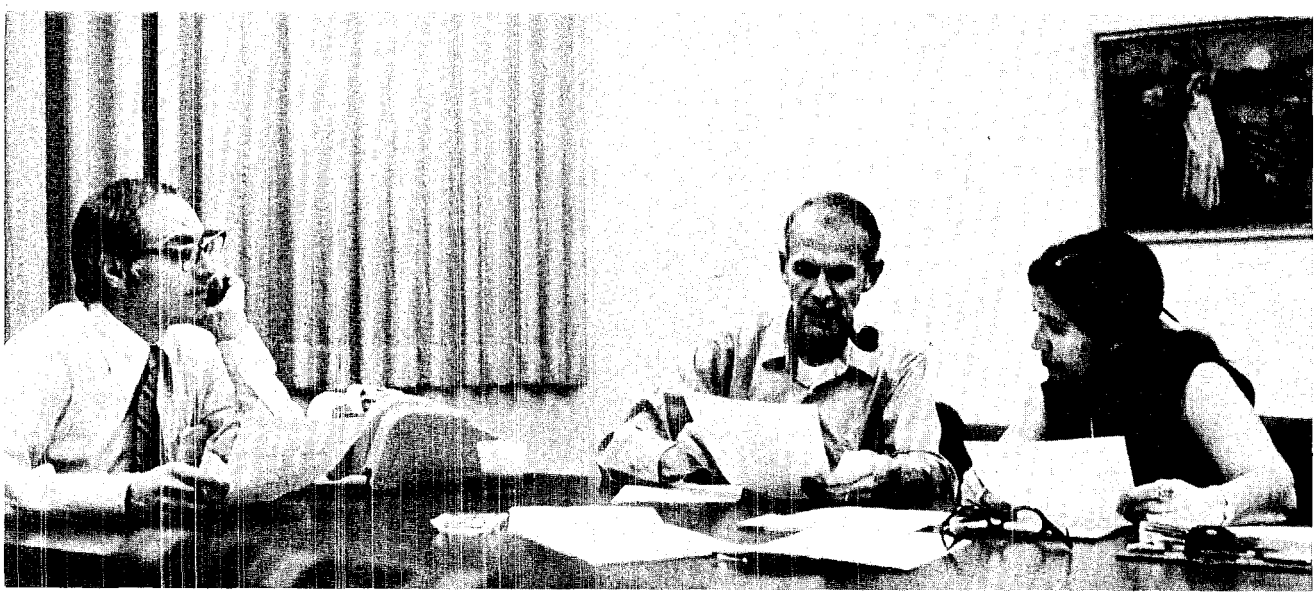
state law. Members may borrow against their shares any time.

The credit union also offers $1,000 savings certificates which pay 6 per cent interest and $5,000 savings certificates which pay 6.5 per cent interest. These certificates are redeemable after one year but may be held indefinitely. Deposit accounts also are available from which money may be withdrawn at any time. Interest of 5.4 per cent is paid quarterly. Vacation/Christmas accounts also earn 5.4 per cent quarterly, and checks for the amount in the account are automatically mailed to the depositor on June 1 for vacations and Dec. 1 for Christmas.

Services such as financial counseling, free notary public service, prices and information on new and used cars and mobile homes, Xerox duplicating service and American Express travelers checks and money orders are provided to members by the credit union.

Membership is increasing in the credit union at the rate of about 100 a month, a fact which Sullins attributes, in part, to the recent authorization of payroll deductions by the Laboratory. In addition to LASL people, membership is also open to employees of other organizations connected with the Laboratory, such as EG&G, and to retired LASL employees. Membership may be retained indefinitely at the discretion of the member after termination of employment.

"New members usually mean an increase in



Three Credit Committee members or their alternates meet nightly to review loan applications. Shown at one of the sessions are alternates Tony Maes, AO-1, and Summers Cox, H-4, and Member Patricia Martin, EG&G.

loans at first," Sullins said, "but in the long run they bring in more savings."

Several types of loans are available to members in addition to those granted for real estate. At 9 per cent interest the credit union offers new car and estate loans, and loans against shares and savings certificates. Second mortgage real-estate loans and mobile home loans are available at 10 per cent interest. At 12 per cent interest there are construction and camper loans, open-end loans and signature loans up to twice the borrower's monthly gross income.

Among the most popular are government-guaranteed student loans which provide up to $1,500 per academic year at 7 per cent simple interest. The credit union has granted more than 700 such loans totaling $1,012,477.

Most loans are approved by the credit union's three full-time loan officers, but all loan applications are reviewed by the Credit Committee, which is made up of members elected by the credit union's members. Currently headed by Glen Camp, the Credit Committee includes Ida Kraig, Arthur Robison, Patricia Martin and John Moore. Three members or their alternates meet nightly to review the day's loan business.

Each day's business is sizeable. To date, the credit union has made 45,828 loans totaling $91 million and is presently loaning about $2.25 million per month. "That's about $100,000 each work day," Sullins pointed out.

Because the credit union is owned by the membership and operates on a non-profit basis, it is required by law to return all profits to the members. In addition to the 6 per cent per annum dividend paid on shares, the credit union offers a rebate to borrowers of part of the interest they pay on loans. The rebate has run as high as 15 per cent and is presently averaging about 10 per cent.

Surplus cash is wired each morning to the Trust Department of the Chase Manhattan Bank in New York for investment with the International Credit Union Services Corporation. ICU investments are primarily in government securities and now average a little over 5 per cent interest. The credit union also maintains an account with Merrill, Lynch, Pierce, Fenner and Smith, Inc., which invests credit union money in corporate and government bonds.

"We ship out about $30,000 a day, or as much as $125,000 to $150,000 on paydays," Sullins said. "We keep our money working right down to the last penny."

Income amounting to about $30,000 a year is derived from office space rented to nine tenants in the Credit Union Building. Completed in 1963 at a cost of about $250,000, the Credit Union Building was the first commercial structure built in Los Alamos with private funds, and when the Los Alamos National Bank occupied part of the first floor, the LASL employees institution became the first credit union ever to have a national bank as a tenant.

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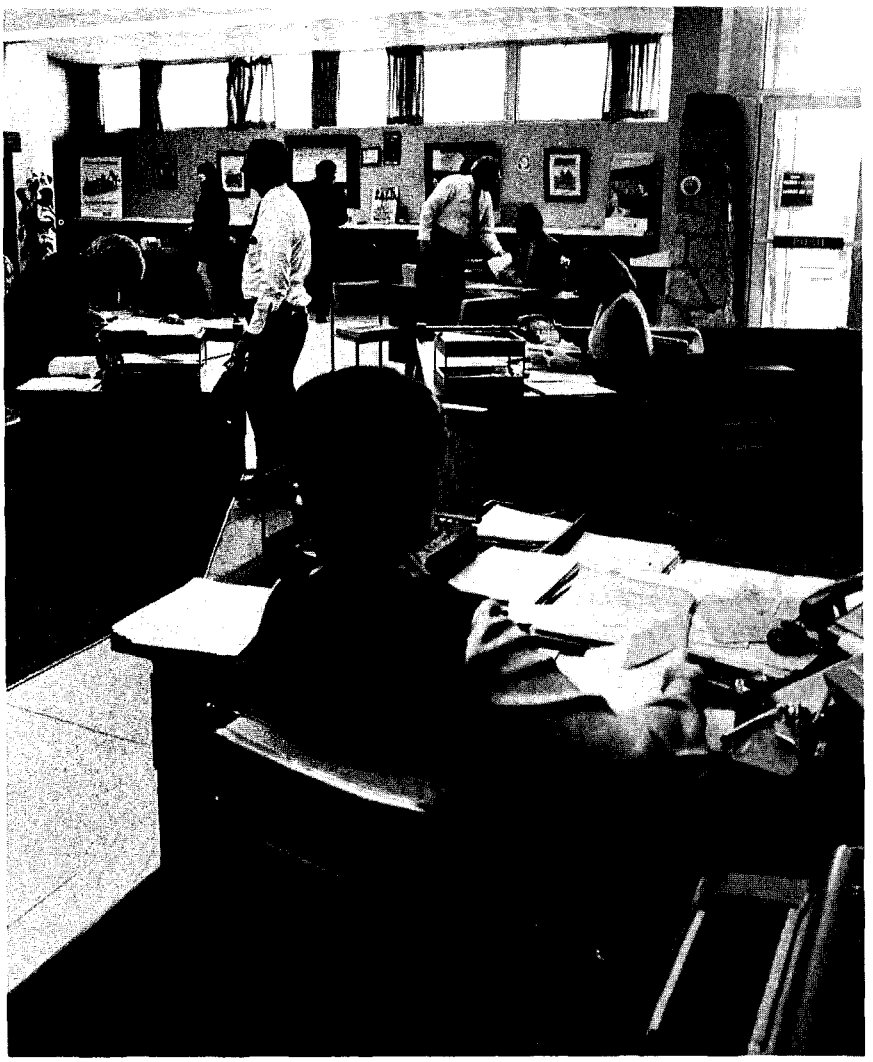

"We are so crowded that . . . our members have to apply for their loans at desks in the lobby," Sullins said.

Income from rent will be considerably reduced when EG&G vacates its half of the first floor this month. Credit union officials are looking forward to expanding into the additional 3,500 square feet of space early next year.

"We are so crowded that our board room now contains three offices and our members have to apply for their loans at desks in the lobby," Sullins said. The new quarters will double the credit union's floor space to 7,000 square feet.

The credit union staff now includes 25 full-time employees and two part-time janitors. Management is provided by the Board of Directors and by the Supervisory Committee, which is composed of unpaid, volunteer members. Bernard Eutsler is president of the Board of Directors this year. Edward Brundige is first vice president; Carl Peterson, second vice president; Robert Hayden, treasurer; and David Watkins, secretary. Directors are Carl Talafous, Eric Fowler, Robert Mitchell and William Erickson.

The Supervisory Committee, which is responsible for auditing all credit union records, is headed by Warren Orton. Cecil Stevens is secretary, and Leroy Apodaca and David Schultz are members.

The Board of Directors and all committees are elected at the credit union's annual meeting, in January, which is open to all credit union members. Sullins said members are not only attending the meetings in greater and greater numbers, but they are extremely quick to respond to credit union actions.

'You begin to think they're not very interested, but the minute we do something there's a big reaction," he said. "It has to do with their feeling of ownership. There is a great feeling among the members that this is their baby; they run this thing."

short subjects

The U.S. Forest Service has designated four areas where Los Alamos residents can cut their own Christmas trees. They are Clara Peak Road, Alamo Ridge, Fenton Hill and Thompson Ridge.

Permits and maps showing boundaries of the tree-cutting areas are available at the Forest Service Office in Los Alamos.

In addition to normal workdays the office will be open from 8 a.m. to 5 p.m. during two weekends. These are Dec. 9-10 and 16-17.

Cost of permits is $1 for trees up to 10 feet and $2 for trees between 10 and 20 feet.

A Forest Service officer will check permits in the tree-cutting areas.

Mark Jakobson of the University of Montana was elected president of the Clinton P. Anderson Los Alamos Meson Physics Facility Users Group's Board of Directors at the organization's annual meeting in Los Alamos.

Other officers elected were **Vernon Hughes,** Yale University, vice president, and **Lewis Agnew,** LASL, secretary-treasurer.

New Board members are **Kenneth Crowe,** Lawrence Berkeley Laboratory; **Robert Macek** LASL; **Stanley Sobottka,** University of Virginia; **Dr. Robert Anderson,** University of New Mexico; and **Harvey Willard,** Case Western Reserve University.

The Users Group was formed in 1969 and incorporated in 1972 to provide a formal channel for the exchange of information between the scientific community at large and the Los Alamos Scientific Laboratory administration. The group has nearly 1,000 members from the United States and 14 foreign countries. The members represent more than 260 institutions such as universities, hospitals and medical centers, and industrial and governmental facilities.

Dr. Raymond Uphoff, H-2, died recently as the result of injuries received in an automobile accident. He is survived by his wife, Shirley Ann, a son, Joseph, and daughter, Katherine.

Robert Keil, CMB-6, died in a Denver hospital following a lengthy illness. He is survived by his wife, Meta Laverne, and two sons, Ronald and Lawrence.

Registration for spring semester undergraduate courses at the Los Alamos Residence Center of the University of New Mexico will be Jan. 18-19 from 10 a.m. to 5 p.m. Classes will begin Jan. 22.

New courses offered include Physics for Non-Science Majors; Approaches to English Literature; Modern European Philosophy; History of Women Since 1800; Genetics; Air Management and the Environment; Film Making in the Schools; and Introduction to Zen, Meditation and Haiku.

A two-year program, Instrumentation Engineering Technology, will continue. However, no new students will be admitted at this time.

Edward Knapp, associate MP-Division leader, has been elected a Fellow of the American Physical Society.

Fellowships in the Society are reserved for members whose contributions to science are exceptionally meritorious.

Bernice Nagy, PER-7, has retired after more than 25 years of Laboratory service. She and her husband, Gaza, SD-5, live in Los Alamos.

Alex Lovato, Sr., CMB-6, has retired after 22 years at the Laboratory. He and his wife, Lita, will continue to live in Los Alamos.

John Boyer, Sr., SD-5, a Laboratory employee since 1951 has retired. He and his wife, Helen, former ISD-7 employee, will continue to reside in Los Alamos.

Harry Craig, H-1, retired after 12 years at LASL. He and his wife live in Los Alamos, but he is dividing his time between home and their ranch in South Dakota.

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The sensitivity of RPC detectors to vapors from heroin was tested with the use of the H-5 test chamber. Gene Taylor, right, transfers heroin from one container to another to release vapors from it into the chamber's atmosphere. In foreground, Gene Wewerka puts a detector's probe through a port in the chamber wall while Dan Loughran, background, operates recording equipment. RPC representatives present for the test were Rod Kemp, left, supervisor of microbiology, and R. R. Sakaida, director of engineering.

Evaluating a Heroin Detector

"Heroin cutting factory" is a term recently introduced to scientists at the Los Alamos Scientific Laboratory by Lieutenant James McSloy of the New York Police Department. It refers to places where the narcotic is prepared for sale to "junkies" on the streets.

McSloy was speaking during a meeting at Los Alamos in preparation for a project, which has since begun at LASL, to evaluate a heroin detector. The instrument was designed to detect heroin from outside a room in which it is being handled. Its operation is based on the phenomenon of bioluminescent bacteria which fluoresce, or emit light, by absorbing vapor given off by heroin. A sensor measures the intensity of the bioluminescent light and electronic circuitry converts it into a display that can be interpreted by a human operator.

The instrument was manufactured for the New York Police Department by the RPC Corporation of El Segundo, Calif., with funds provided by the U.S. Department of Justice Law Enforcement Assistance Administration. It has been in use for about a year and funds for further development have been requested.

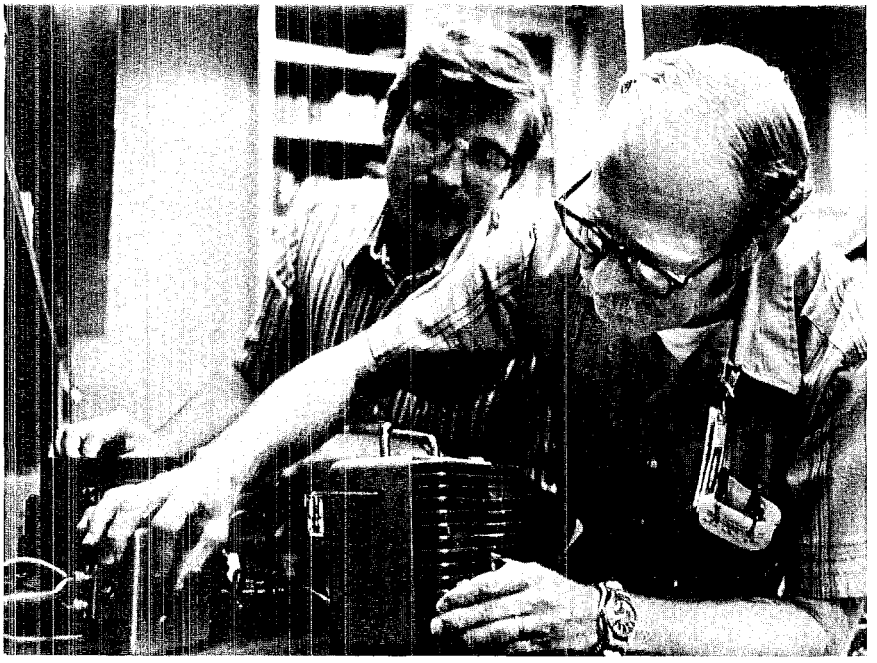
Based on a recommendation by the President's Office of Science and Technology that development work on the instrument cease pending a thorough evaluation, the Department of Justice entered into an agreement with the Atomic Energy Commission to have the Los Alamos Scientific Laboratory test, evaluate and outline further development work if appropriate. Local arrangements were made through the Laboratory's Special Projects Office.

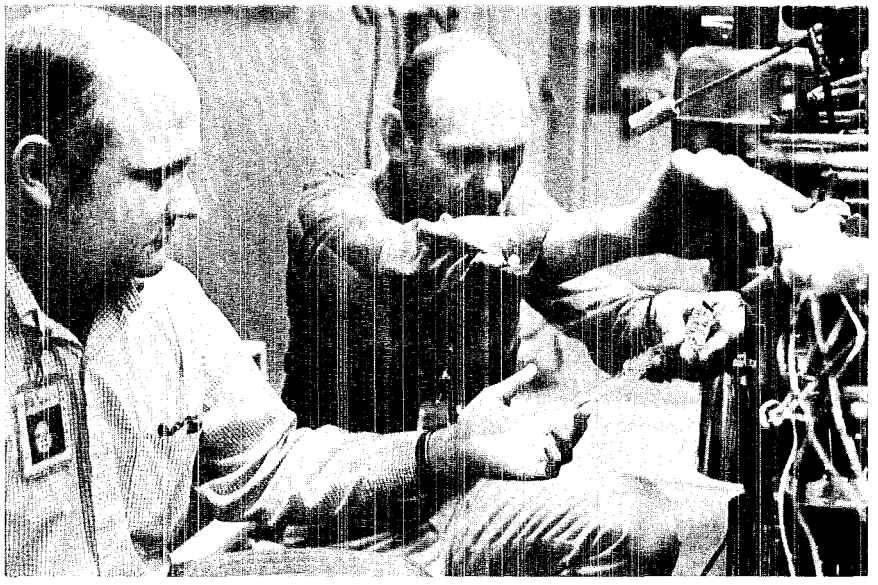
LASL scientists will cover nine points. These are: analyze heroin samples to determine chemical species contained in their vapors; determine the response of the instrument to these species when operated as recommended by RPC; consider chemical compounds in common use that might interfere with the device's intended use; analyze electronic and other aspects of the device to determine whether modifications could be made to improve its sensitivity or specificity for detection of chemical species evolving from heroin; determine the effects of atmospheric humidity and temperature upon the rate of evolution of chemical species and the response of the device to them; estimate diffusion rates through common materials that could be used as barriers to detection; assess the reliability, maintainability and ease of operation; generally assess the usefulness

continued on page 12

During the sensitivity test at the H-5 test chamber, Wewerka probed around the slightly opened chamber door to determine whether the instrument would detect escaping vapors from the heroin.

Below, Wewerka and Raymond Rogers, examine RPC detectors being used in the LASL evaluation project.





Taylor and Loughran mate an ampule, containing heroin, to the inlet of WX-2's high resolution mass spectrometer. The group's mass spectrometers are being used to determine chemical species contained in heroin.

Explaining the operation of a heroin detector to representatives of various governmental agencies concerned with the LASL project is RPC's R. Thanos, director of microbiology. Seated at the table to his left are Lester Shubin, program manager for standards, National Institute of Law Enforcement and Criminal Justice; Howard Schlesinger, staff assistant, Bureau of Narcotics and Dangerous Drugs; Hal Lewis of the University of California at Santa Barbara, representing the President's Office of Science and Technology; Don Petersen, Group H-4; and Raymond Rogers, WX-2 alternate group leader. In foreground are James McSloy, commander of the NYPD Planning Division's Funding, Research and Development Section, and Robert Wallace of the New York City Mayor's Criminal Justice Coordinating Council.

of the device for detection of heroin from outside a room in which it is being handled; and make recommendations to the Justice Department as to the potential of bioluminescent detectors for heroin and outline further research and development work if appropriate.

According to Raymond Rogers, WX-2 alternate group leader, molecular analysis of heroin samples has begun, using the group's mass spectrometers and gas chromatographs. The results of these studies, he said, will define other analytical methods to be used. "WX-2 is one of the few organic analytical groups at the Laboratory. Its members are primarily organic and physical chemists who are experienced in research on organic chemistry of materials. We have three types of mass spectrometers which we use in our analytical work. The group also has other capabilities to detect and identify products, including gas, thin layer and liquid chromotography and nuclear magnetic resonance. All of these could be used in the heroin detector project. Individual efforts in analysis and testing are being directed by Dan Loughran, Gene Wewerka and Gene Taylor.

"Other groups that have organic capabilities include H-4, H-5 and WX-3. The project could involve these groups. E-Division personnel will evaluate the electronics of the instrument."

Members of concerned agencies met at Los Alamos in September to discuss the project. The meeting was chaired by Austin McGuire, head of LASL's Special Projects Office. Other Laboratory officials included Melvin Brooks, associate WX-Division leader, who is responsible for making administrative arrangements required to accomplish technical objectives of the project,

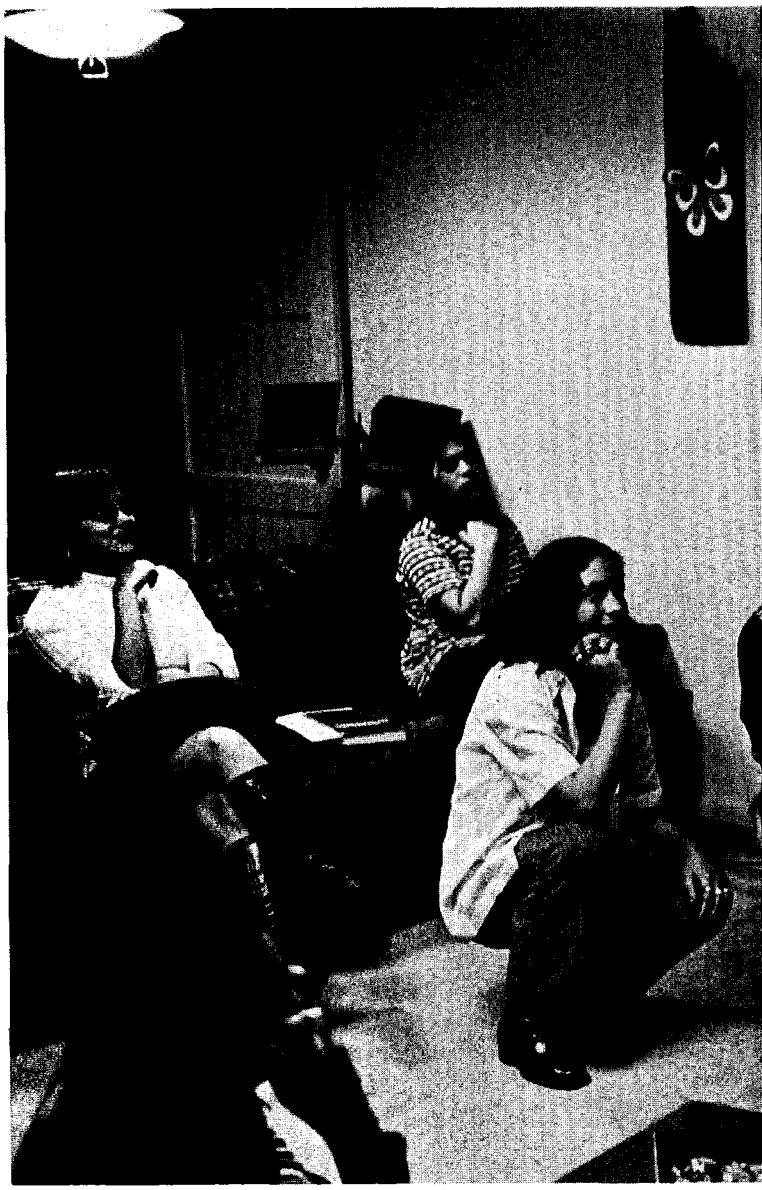
Bob Van Gemert, head of LASL's Supply and Property Department, third from left, signs for a heroin sample to be used in the Laboratory evaluation project. At left are Dean Graves of the AEC's Albuquerque Operations Office, and McSloy. To the right of Van Gemert are Dale Holm, H-6 group leader, Richard Hiebert, E-4 group leader, Loughran and Wewerka.

and Rogers, the project's technical manager. In addition to the LASL personnel, other persons attending were McSloy, commander of the NYPD Planning Division's Funding, Research and Development Section; Robert Wallace of the New York City Mayor's Criminal Justice Coordinating Council; Hal Lewis of the University of California at Santa Barbara, representing the President's Office of Science and Technology Panel on Narcotics; Howard Schlesinger, staff assistant for the Justice Department's Bureau of Narcotics and Dangerous Drugs; Lester Shubin, program manager for standards, National Institute of Law Enforcement and Criminal Justice; Dean Graves of the AEC's Albuquerque Operations Office; A. Thanos, director of microbiology, and R. R. Sakaida, director of engineering, both of the RPC Corporation.

McSloy told those attending the meeting that the NYPD's primary interest in the device is to detect heroin cutting factories. "Informants often give us tips on where heroin is being cut. It's never done in the same place twice. They (the persons who cut the heroin) usually rent an apartment for a day and pay a pretty good price for it—$200, maybe $300. The whole cutting process only takes about 12 hours so we don't have much time to find where it is being done. To search each apartment in a building takes more time than we've got. The RPC device was designed to detect heroin through closed doors so that we can find a factory by turning on the probe outside apartment doors, in the vicinity of our information, until we come to the right one."

Thanos exhibited one of the heroin detectors to be included in the Laboratory's investigation which is expected to be completed within three months.

Jo, left, and Kathy, right, help Houseparent Kathy Dailey with meal preparations.



Casa Mesita

"We're very pleased with the response. We have the capacity for six girls and a long list of them applying for admission," said Kathy Dailey.

Mrs. Dailey and her husband, Dan, are house parents and counselors at Casa Mesita, a home in Los Alamos where girls can receive professional help in working out their behavioral problems.

Until the doors at Casa Mesita were opened, such help for girls was limited in northern New Mexico to homes for those who are unwed and pregnant and to a correctional institution for those who break the law. The Los Alamos venture concerns itself with girls such as the truant, the runaway, the seemingly unmanageable, and the mistreated and neglected in an effort to help

On Saturdays, activities of the Casa Mesita "family" include a group meeting. Leading the discussion is Dan Dailey.

girls help themselves come to grips with their problems.

While the home is primarily community supported, efforts to establish it began in the United Church in Los Alamos. "At a series of meetings held to determine interest in such a project, half of the people attending were from outside the church," said Mrs. Ellen Farrell, chairman of the Casa Mesita Board of Directors. This was also true among members of the committee formed to explore various aspects of the proposed project. The members were Dolly Everett, Bill and Gay Bennett, Ed Williams and Mrs. Farrell.

"We started researching the kind of housing that would be required, the feasibility of bringing the girls into the school system and where we might obtain funding," Mrs. Farrel continued. As it turned out, the venture would have been too costly for the local church to support, and there was no money available for the project from the national church systems represented in the United family. For these reasons, and with the consent of the church officials, ties with the United Church were severed, and the committee looked to the community for support.

Although the project was no longer connected with the church, it was the Women's Society of the United Church that made the first contribution—$86, which was used to open Casa Mesita's checking account at a local bank. "Until that time the project was known as the Northern Rio

continued on next page

Grande Valley Girl's Project," said Mrs. Farrell. "The name was too long, but we needed to call the project something because you have to have a name on a checking account. We settled on Casa Mesita. In Spanish, it means 'house on a small mesa.' It has a nice sound and it's short."

In the following months, a fund drive and contributions from individuals, church groups and civic clubs brought in enough money to rent a Western Area single owned by Charles Holley and his wife, Bobby. The Holleys are active supporters of Casa Mesita and, also, the Jemez House for Boys and Santa Maria El Mirador Home for Retarded Young Men.

It was the Holleys who first contacted the Daileys. "We were working at Santa Maria El Mirador," said Mrs. Dailey. "We met the Holleys there. They asked us if we would be interested in applying for the job of house-parents and counselors at the new home for girls. Casa Mesita had incorporated, and its Board of Directors was taking applications for the job. We applied, and we were accepted."

In addition to Mrs. Farrell, other officers of the Board of Directors are Mrs. Everett, vice chairman, Mrs. Bennett, secretary, and Holley, treasurer. Members are Lud Emelity, Jacqueline Farr, Karen Mace and Shirley Sundberg. In accordance with recent elections, in January Mrs. Mace will become vice chairman, Ann Albrink, secretary, and Arlene McDowell, a member of the board.

"There were other applicants for the job, but we felt Dan and Kathy were best suited for it," said Mrs. Farrell. Both of the Daileys have bachelor's degrees in psychology. She has the master's degree in rehabilitation counseling. He was working on the master's and doctorate's degrees at Kent State University when he was drafted. After two years in the U.S. Army, which included a tour in South Vietnam, Dailey was honorably discharged, and he and his wife were employed at Santa Maria El Mirador in March of this year.

The Daileys moved into Casa Mesita Sept. 1. With them was Riley, an Irish setter, and Mac, a small terrier. "The dogs make a contribution to creating a warm home environment," Mrs. Dailey noted, "and so does the gerbil." The gerbil is called "First," and was contributed by Mrs. Farrell's son, Devin.

"The first girl came Sept. 19," said Mrs. Dailey. "She was our only girl for a month or so. We prefer that girls enter the home a few weeks apart. It gives them a chance to acclimate themselves to their new environment, and it gives them and us a chance to get used to each other.

"We try to be parents and counselors to them and to create a family-type atmosphere for them. The girls are here for a minimum of three months and a maximum of about a year, depending on how fast they progress in dealing with their problems. At the same time a caseworker works with their families.

"Admissions are limited to six girls, partly because of the size of the house and partly because of zoning laws, but mostly because it would be difficult to give any more than six the individual attention they need. This is probably the greatest key to helping the girls work out their problems.

"Girls who apply to come here are screened by the Admissions Committee, which is made up of Dr. Anne Warren, Mrs. Mace, Dan and myself. Some of the requirements are: a girl must be be-

tween the ages of 12 and 17; she must have the potential for average achievement; there should be no more than a two year age-grade lag in school; she must be in school when she applies; and most importantly, she must want to come to Casa Mesita.

"We feel she has this decision to make. If we have to pull her through the door, she won't want to do anything to change her behavior.

"After we receive an application, we set up an interview here with the girl and her parents, if they are available. This gives the girl a chance to see the environment at Casa Mesita. At the same time, we determine if she would benefit by staying with us. If we think so, we put her on hold status until we have a vacancy."

Some girls are referred to Casa Mesita by the New Mexico Health and Social Services Depart-

continued on next page

Karen and Jo listen to records on the stereo while Bernadett, with earphones, listens to a program on the Daileys' radio set.

Mealtime at Casa Mesita is no different than in any other home. The girls help prepare the food, and they help wash the dishes before settling down with their homework or leisure activities.

Winter's first snowfall was followed by a snowball fight with Dailey against the Casa Mesita girls.

ment, which licenses the home and pays $107 a month for each girl it places there. Referrals may also be made by the Family Council, the Probation Department, school officials, doctors, ministers and families. In these cases, a girl's family is expected to contribute to the girl's support according to its ability. "Expenses run about $350 a month per girl," Mrs. Dailey said, "so most of our support comes from community contributions.

"How long a girl stays here depends on how rapidly she progresses through our 'step' program." This program is a sequence of five steps, each of which is tied to certain responsibilities and privileges. While some of the responsibilities are physical, all are designed to help a girl attain a positive and socially acceptable attitude.

When the Daileys feel a girl's behavior has im-

proved to satisfactorily comply with the responsibilities in one step, she is graduated to another. In each subsequent step, a girl takes on more responsibilities and is rewarded with more privileges.

One privilege of all girls at Casa Mesita is an allowance which they are free to spend as they desire. The allowance for girls in junior high school is 25 cents a week. Girls in senior high school receive 50 cents a week.

"In addition," said Mrs. Dailey, "we have a 'point' system so the girls can earn up to an additional $1.75 a week. They are given points for such things as doing their laundry, cleaning their rooms and other assigned house chores. Each point is valued at a penny. Points are awarded according to how well a girl does her job."

When a girl is admitted to Casa Mesita, all she needs to bring for her stay are her clothes and any other personal belongings for the bedroom she will share with another girl. Coordinated by Mrs. Everett, all rooms in the house have been furnished through contributions from several organizations and individuals. Bedrooms were furnished by the American Association of University Women, the American Legion Auxiliary and Beta Chi Chapter of Epsilon Sigma Alpha Sorority. The Rainbow Girls furnished the kitchen, and the Bethlehem Evangelical Lutheran Church furnished a room used as an office. Many of the furnishings were collected and moved to the home by members of the Key Club. In addition, the Civitans provided Casa Mesita with an upright freezer, and the Los Alamos Building and Loan Association filled it with meat. The Los Alamos Jaycees fenced the back yard, and Cub Scouts filled the kitchen cupboards with canned goods collected in a special drive conducted for the girls' home.

"The girls grow into a kind of sister relationship," Mrs. Dailey said. "We have our good times and our bad. We even quarrel among ourselves occasionally, as members of any family do.

"After they come home from school, the girls have their snacks and watch television or listen to the stereo. After they have their supper they can do their homework and watch television. Saturdays we all pitch in and do a super housecleaning job, and we have a group meeting. We have group activities during the weekends, like swimming or hiking. Last weekend we chopped wood for the fireplace. In the spring we hope to get some camping equipment and some bicycles for the girls."

Kathy reads during a study session with Karen and Debbie.

Bernadett and Jo work on a jigsaw puzzle during their leisure time.

the technical side

Taken from Technical Information Reports submitted through ISD-6

Twenty-fifth Annual Conference on Engineering in Medicine and Biology, Miami, Fla., Oct. 1-5:

"Identification and Sorting of *Human Leukocytes*" by J. A. Steinkamp, M. A. Van Dilla and Angela Romero, all H-4

Materials Science and Engineering Colloquium, Stanford University, Calif., Oct. 2:

"Effects of Strain Rate and Temperature on the Strength and Microstructure of Aluminum" by J. E. Hockett, WX-5 (invited)

Third All-Union National Conference on Particle Accelerators, Moscow, U.S.S.R., Oct. 2-4:

"Performance of LAMPF Computer Control System" by H. S. Butler, MP-1

Third Joint Working Conference, Division of Cancer Treatment, National Cancer Institute, Baltimore, Md., Oct. 2-4:

"Use of Flow Microfluorometry in Analysis of Effects of Agents on Cell-Cycle Progression" by R. A. Tobey, H-4 (invited)

Meeting of Users of Control Data 6000 Series Computers, Bremen, West Germany, Oct. 2-5:

"HYDRA—The LASL 7600 Front-End System" by R. D. Christman and D. E. Schultz, both C-2

International Conference on Modern Trends in Activation Analysis, Saclay, France, Oct. 2-6:

"Active ^{3}He Activation Analysis for Carbon and Oxygen" by W. M. Sanders, J-12, B. K. Barnes, Lowell Technological Institute, Mass., and D. M. Holm, H-6

Third International Conference on Beam Foil Spectroscopy, Tucson, Ariz., Oct. 2-6:

"The Theory of Rare Earth Energy Levels and Spectra" by R. D. Cowan, T-4 (invited)

Tbilissi School on Plasma Physics, U.S.S.R., Oct. 2-11:

"Theory of Waves in High-Beta Plasmas" by H. R. Lewis, P-18

Seminar, University of New Mexico School of Medicine, Albuquerque, Oct. 3:

"Flow Microfluorometry: Principles and Applications for Cell Biology" by H. A. Crissman, H-4 (invited)

AESOP-VII Conference, Idaho Falls, Idaho, Oct. 3-5:

"LASL's Proposed Integrity Study" by R. B. Lazarus, C-DO (invited)

USA-Japan Computer Conference, Tokyo, Japan, Oct. 3-5:

"A Trilogy on Errors in the History of Computing" by N. Metropolis, C-DO, and J. Worlton, CADP (invited)

Colloquium, University of New Hampshire, Durham, Oct. 4:

"Solar Radio Events and Related Cosmic Ray Effects" by I. D. Palmer, P-4 (invited)

Colloquium, Sandia Laboratories, Albuquerque, Oct. 4:

"The LASL Geothermal Energy Program" by M. C. Smith, CMB-13 (invited)

Association for Computing Machinery's SIGPLAN Two-Dimensional Man-Machine Communications Symposium, Los Alamos, Oct. 5-6:

"A Review of Two-Dimensional Programming Languages" by M. B. Wells, C-7

" The Terminal Control Language for the Madcap Programming Language" by Marjorie Devaney and Jeanne Hudgins, both C-7

Rocky Mountain Section, American Industrial Hygiene Association Meeting, Denver, Colo., Oct. 5-6:

"Performance Tests of Bureau of Mines Approved Disposable Respirators" by C. P. Richards, T. O. Moore and E. C. Hyatt, all H-5

"Selection of a Respirator Test Panel Representative of U.S. Male Face Sizes" by A. L. Hack, T. O. Moore and C. P. Richards, all H-5

"Personal Air Sampling for Formaldehyde" by G. O. Wood, H-5

"Calibration Standards for Certification of Facilities Counting Asbestos" by L. W. Ortiz, H. J. Ettinger and C. Fairchild, all H-5

"Size Characteristics of Plutonium Aerosols" by J. C. Elder, M. Gonzales and H. J. Ettinger, all H-5

"Plutonium in Autopsy Tissue of a General Population" by E. E. Campbell, M. F. Milligan, W. D. Moss and H. F. Schulte, all H-5

International Conference on Engineering of Fast Reactors for Safe and Reliable Operation, Karlsruhe, West Germany, Oct. 9-13:

"Reactor Power Excursion Studies" by W. R. Stratton, L. B. Engle and D. M. Peterson, all N-2

European Laser-Fusion Conference, Marly le Roi, France, Oct. 9-13:

"U.S. AEC Laser-Fusion Program" by K. Boyer, L-DO

Fourth International Conference on Reactor Shielding, Paris, France, Oct. 9-13:

"Monte Carlo Development and Applications in the Los Alamos Nuclear Rocket Program" by C. W. Watson, N-2, and E. D. Cashwell, TD-6

"Anisotropy of Photon Emission in Transport Calculations" by D. J. Dudziak and G. E. Bosler, both T-1

Eighteenth Annual Conference on Bioassay, Environmental, and Analytical Chemistry, Argonne, Ill., Oct. 10-11:

"Plutonium-242 Versus Plutonium-236 as an Analytical Tracer in Bioassay" by I. K. Kressin, H-5

"Long Term Urinary Excretion Patterns of Plutonium" by W. D. Moss, H. F. Schulte and E. E. Campbell, all H-5

"Urine and Fecal Excretion of Plutonium Following an Inhalation Exposure" by E. E. Campbell, W. D. Moss, H. F. Schulte, I. K. Kressin and M. F. Milligan, all H-5

1972 Proton Linear Accelerator Conference, Los Alamos, Oct. 10-13:

"An Automated Admittance Measurement at LAMPF" by J. E. Stovall, MP-9

"Beam Transport Studies on the Proton Beam Line in the Injector Complex of LAMPF" by R. R. Stevens, Jr., B. C. Goplen and J. E. Stovall, all MP-9

"Operation and Performance of the High Intensity Proton Injector of LAMPF" by D. W. Mueller, E. A. Meyer, R. R. Stevens, Jr., and B. C. Goplen, all MP-9, M. A. Paciotti, MP-3, and C. R. Emigh, P-DOR

"Some High Resolution Techniques for Use with Negative Ion Beams" by J. E. Spencer and H. A. Thiessen, both MP-7

"Statistical Beam Transport for High Intensity Ion Currents" by C. R. Emigh, P-DOR

"A New Beam-Spill Control System for LAMPF" by J. R. Parker, J. H. Richardson and J. D. Easley, all MP-1

"Transverse Beam Matching Using Wire Scanners" by K. R. Crandall, MP-9

"Cement Potted Coils for Muon Channel Magnets" by H. F. Vogel, MP-7, and J. J. Rosenthal, CMB-6

"Computer Control of LAMPF's 201.25-MHz RF" by R. A. DeHaven, MP-8

"Ripple Current and Flux in Mineral Insulated Magnets" by E. J. Schneider, MP-8

"The LAMPF Klystron Repair Facility" by P. J. Tallerico, MP-8

"LAMPF Accelerator Development" by R. A. Jameson, MP-9

"The $\triangle t$ Turn-On Procedure" by K. R. Crandall, R. A. Jameson, D. I. Morris and D. A. Swenson, all MP-9

"Cavity Tuning for the LAMPF 805-MHz Linac" by G. R. Swain, R. A. Jameson and D. J. Liska, all MP-9, R. Kandarian, MP-8, E. R. Martin, A-1, and J. M. Potter, MP-4

"Installation and Alignment of LAMPF 201-MHz and 805-MHz Linac Tanks" by V. E. Hart and E. W. Colston, both MP-8

"Alignment Philosophy, Design and Techniques Used at LAMPF" by E. W. Colston and V. E. Hart, both MP-8

"Measurements and Calculations of Field Distributions in Short Helical Resonators" by P. J. Bendt, B. H. Erkkila and R. H. Stokes, all P-12, T. A. Tombrello, and K. S. Jancaitis, both California Institute of Technology, Pasadena

Arizona State University, Tempe, Oct. 11-12:

"Energy for the Future with Special Reference to Fission and Fusion" by J. L. Tuck, P-DO

"Conjectures on the Nature of Ball Lightning" by J. L. Tuck, P-DO

Battelle Northwest Laboratories, Hanford, Wash., Oct. 12:

"Current Research Activities of the Aerosol Group at Los Alamos Scientific Laboratory" by H. J. Ettinger, C. I. Fairchild, O. R. Moss, L. W. Ortiz and M. I. Tillery, all H-5

Department of Physics, University of California at Riverside, Oct 12:

"The History of a Stolen Idea: The Titius-Bode Law of Planetary Distances" by M. M. Nieto, T-5

Lecture, Department of Microbiology, University of New Mexico School of Medicine, Albuquerque, Oct. 13:

"Carbon Pathways: Glycolysis and Related Fermentations" by C. T. Gregg, H-4 (invited)

Rio Grande Chapter, Association for Computing Machinery, Santa Fe, Oct. 13:

"STAT: A Software Performance Measurement Tool for the CDC 7600" by K. J. Melendez, F. McGirt, D. A. Plaisted and L. E. Rudsinski, all C-4

Annual Regional Meeting, Southwest Tri-State Branch, American Society for Microbiology, El Paso, Texas, Oct 13-14:

"Prophage Excision in **Haemophilus Influenzae**" by B. J. Barnhart and S. H. Cox, both H-4

"Bacteria Phage T-4 Gets Ahead" by R. T. Okinaka, H-DO

Autumn Meeting, National Academy of Science's Symposium on The New Accelerators, Washington, D.C., Oct. 16:

"The Clinton P. Anderson Meson Physics Facility (LAMPF)" by L. Rosen, MP-DO (invited)

Seminars, University of Iowa, Iowa City, Oct. 16, Michigan State University, East Lansing, Oct. 20, and University of Arizona, Tucson, Nov. 2:

"Pion Production from Nuclei" by R. R. Silbar, T-5

1972 Annual Technical Symposium, Society of Photographic Instrumentation Engineers, San Fransisco, Calif., Oct. 16-17:

"Film-Image-Synchronized, Rotating-Slit-Shuttered, Drum Field Cameras for Projectile-in-Flight Photography" by P. M. Giles, H-6

Third Symposium on Stored Program Controllers, Los Alamos Scientific Laboratory, Oct. 16-17:

"A Stored Program Controller for a Three Channel, Two Axis, Scanning Photometer" by D. L. Stephenson, E-5

Nuclear Energy Agency Seminar-Workshop on Shielding Programs, Ispra, Italy, Oct. 16-18:

"Use of LAPHANO for Gamma-Ray Shielding Studies" by D. J. Dudziak, T-1 (invited)

Society for Industrial and Applied Mathematics-Special Interest Group

continued on next page

on Numerical Mathematics 1972 Fall Meeting, Austin, Texas, Oct. 16-18:

"The Numerical Solution of Elliptic Partial Differential Equations Using Finite Element Methods" by F. W. Dorr, C-4 (invited)

"Efficient Approximations of Functions for 'Pipe-Line' Computers" by L. W. Fullerton, T-4

1972 Materials Engineering Congress, Cleveland, Ohio, Oct. 16-19:

"Particulate Composite Materials Technology at the Los Alamos Scientific Laboratory" by R. E. Riley and J. M. Taub, both CMB-6

Colloquia, Physics Departments of: University of Iowa, Iowa City, Oct. 17, Michigan State University, East Lansing, Oct. 19, University of Pensylvania, Philadelphia, Oct. 25, University of Toledo, Ohio, Oct. 26, and the University of Arizona, Tucson, Nov. 2:

"Los Alamos Meson Factory" by R. R. Silbar, T-5

National Bureau of Standards Conference on Facepiece Leakage and Firefighting, Gaithersburg, Md., Oct. 17:

"How Much Facepiece Leakage?" by E. C. Hyatt, H-5 (invited)

Meeting, Optical Society of America, San Francisco, Calif., Oct. 17-20:

"Studies of Atomic Radial Wavefunctions Via Computer-Produced Movies" by R. D. Cowan, T-4 (invited)

"The Emission Spectrum of Uranium between 19,080 and 30,261 cm^{-1}" by D. W. Steinhaus, CMB-1

"New Wavelengths and Energy Levels in the Spectrum of Singly Ionized Chlorine (Cl II)" by L. J. Radziemski, Jr., CMB-1, and V. Kaufman, National Bureau of Standards, Washington, D.C.

"A Faster LASL Lens Design System" by B. Brixner, M-5

Twenty-fifth Annual Gaseous Electronics Conference, University of Western Ontario, London, Ontario, Canada, Oct. 17-20:

"Nanosecond Pulse Generation at 10.6 N" by J. F. Figueira, W. H. Reichelt, E. Foley and C. A. Fenstermacher, all L-1

"Theoretical Studies of the Electron Beam Controlled CO_2 Laser" by A. M. Lockett, III, T-6

"Range Enhancement of 135-keV Electrons from Applied Electric Fields in Dense Gas" by W. T. Leland, J. P. Rink and C. A. Fenstermacher, all L-1

"Characteristics of High Pressure Carbon Dioxide Laser Amplifiers Pumped with Electron Beam" by W. T. Leland, M. J. Nutter, J. P. Rink and C. A. Fenstermacher, all L-1

"Pulse Amplification in the LASL Electron Beam Pumped CO_2 Laser System" by W H. Reichelt, J. F. Figueira, C. E. Landahl, E. O. Swickard, T. F. Stratton and C. A. Fenstermacher, all L-1

"CO_2 Amplifier Energy Extraction—Comparison of Theory and Experiment" by G. T. Schappert and T. F. Stratton, both L-1

"Electron Beam Transport in Laser Discharges" by D. B. Henderson, L-DOT

"Emission from Long-Lived States of N_2^+. Relation to $N_2^+ + N_2 \rightarrow N_0^+ + N$" by W. B. Maier, II, and R. F. Holland, both J-10

Society for Experimental Stress Analysis Meeting, Technical Committee on Strain Gages, Seattle, Wash., Oct. 17-20:

"Review and Status of Radiation Effects Research on Strain Gages" by C. R. Tallman, N-4

Lecture, Department of Microbiology, University of New Mexico School of Medicine, Albuquerque, Oct. 18:

"Carbon Pathways: TCA, Glyoxylate Cycle" by C. T. Gregg, H-4 (invited)

Interagency Mechanical Operations Group Numerical Systems Meeting, Los Alamos Scientific Laboratory, Oct. 18-20:

"Model CM-101 Boice Coordinate Measuring Machine with a

PDP-8/E Data Handling System" by R. J. Gladfelter, Jr., SD-6

"Some Examples of Interesting Applications of N/C Machines at LASL" by G. H. Anderson, SD-6

Refractory Composites Working Group Meeting, Cleveland, Ohio, Oct. 18-19:

"Carbon and Graphite Research and Development at LASL" by R. J. Impresciа, CMB-13

Lecture, Department of Microbiology, University of New Mexico School of Medicine, Albuquerque, Oct. 20:

"Electron Transport" by C. T. Gregg, H-4 (invited)

Conference on Magnetospheric Substorms, Rice University, Houston, Texas, Oct. 20-21:

"Plasma Observations During Substorms" by E. W. Hones, Jr., P-4

American Astronomical Society, Division of High Energy Astrophysics Meeting, Pasadena, Calif., Oct. 23-25:

"Production of p-Process Nuclei During Explosive Carbon and Oxygen Burning" by W. M. Howard, P-11, and S. E. Woosley, Rice University, Houston, Texas

Department of Anatomy, Laboratory of Radiobiology, University of California, San Francisco, Oct. 24, and Department of Biology, City of Hope Medical Center, Duarte, Calif., Oct. 25:

"DNA Constancy in Heteroploid Cell Populations" by L. L. Deaven, H-4 (invited)

Los Alamos Section, Institute of Electrical and Electronics Engineers, Los Alamos, Oct. 24:

"The LASL Geothermal Power Project" by M. C. Smith, CMB-13

Physics Department, Washington State University, Pullman, Oct. 24:

"Magnetic Resonance Studies of Uranium Compounds" by H. G. Hecht, CNC-2 (invited)

Sixteenth Conference on Analytical Chemistry in Nuclear Technology, Gatlinburg, Tenn., Oct. 24-26:

"Special Instrumental Methods of Analysis" by J. R. Phillips, E. A. Hakkila, G. M. Matlack and J. Bubernak, all CMB-1

"Analyses of Irradiated Fuels and Measurements of Interstitials" by J. W. Dahlby, R. M. Abernathey, M. E. Smith, J. E. Rein and A. Zerwekh, all CMB-1

"Analytical Chemistry Facilities and Capabilities at the Los Alamos Scientific Laboratory" by G. R. Waterbury, CMB-1

"Assay and Impurity Analyses of Uranium and Plutonium Materials" by R. T. Phelps, R. G. Bryan, D. C. Crowley, A. D. Hues and D. W. Steinhaus, all CMB-1

Seventh Symposium on Fusion Technology, Grenoble, France, Oct. 24-27:

"Scyllac, Eighteen Months Later" by C. F. Hammer, H. W. Harris and E. L. Kemp, all P-16, W. E. Quinn, G. A. Sawyer and K. S. Thomas, all P-15

Special Carbon Symposium, Sandia Laboratories, Albuquerque, Oct. 25-27:

"The Use of Organometallic Compounds to Form Dispersions of Fine Carbide Particles in Carbons" by E. M. Wewerka, WX-2, and R. J. Impresciа, R. D. Reiswig and L. S. Levinson, all CMB-13

Annual Plant Facilities Manager's Meeting, Denver, Colo., Oct. 25-27:

"LASL Quality Assurance Program for Construction Projects" by E. L. Brazier, Jr., ENG-1

Atomic Energy Commission Pollution Control Conference, Oak Ridge, Tenn., Oct. 25-27:

"The Significance of Federal and State Air Pollution Standards" by H. F. Schulte, H-5

Association for Computing Machinery Student Chapter Meetings, University of North Carolina, Chapel Hill, Oct. 25, and Mississippi State University, State College, Miss., Oct. 26:

"Evolution of Programming Languages" by M. B. Wells, C-7 (invited)

Biomedical Division, Lawrence Livermore Laboratory, Calif., Oct. 27:

"Techniques for Banding Chromosomes with Giemsa Stain" by L. L. Deaven, H-4

New Mexico Branch, American Society of Civil Engineers, Santa Fe, Oct. 27:

"Wind Load Requirements, New and Old Codes" by M. D. Keller, ENG-1

Colloquium, Astronomy Department, New Mexico State University, Las Cruces, Oct. 27:

"Buoyant Rise of a Supernova" by E. M. Jones, J-10 (invited)

Meeting-in-Miniature, Rio Grande Valley Section, American Chemical Society, New Mexico State University, Las Cruces, Oct. 28:

"Chemical Problems Related to the Development of Controlled Thermonuclear Reactors" by J. L. Anderson, CMB-3

Meeting, National Safety Congress, Chicago, Ill., Oct. 30-Nov. 2:

"Working Alone in Research and Development Activities" by R. Reider, H-3

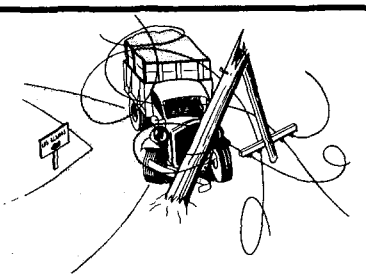
Navy Re-entry Vehicles Materials Technology Program Graphite Team Working Meeting, Naval Ordnance Laboratory, Silver Springs, Md., Oct. 31:

"Development of Improved Re-entry Vehicle Nosetip Graphites at LASL" by R. J. Impresciа, CMB-13

University of Arizona's Cancer Treatment Facility, Tucson, Oct. 31:

"A Physicist's View of Radiation Oncology" by L. Rosen, MP-DO

20 years ago in los alamos



Culled from the Dec., 1952, files of the Santa Fe New Mexican by Robert Porton

Gravel Truck Puts Telephones Out of Order

All telephone service to the Hill was cut off for a day. Claude Baker of Mountain States Telephone Company stated that the wires broke near the Otowi bridge when a Highway Department gravel truck was making a turn off the main road and crashed into a pole. All teletype circuits were out of order for hours and the company was relaying long-distance calls by radio circuits to Santa Fe. Service was finally restored after workmen repaired the break.

School Board Election Scheduled

The Board of Educational Trustees of Los Alamos County announced Monday that an election will be held in February to select two new members to succeed Norris Bradbury, chairman of the board, and Leslie Hawkins. Bradbury is director of the Los Alamos Scientific Laboratory and Hawkins is budget officer for the Laboratory.

Lions-Kiwanis Basketball Game Set

A group of Lions Club members have begun practice at the high school gymnasium in preparation for their basketball game with the Kiwanis Club. Proceeds of the contest will go to the local March of Dimes Fund. The following rules have been established for the game: Not over 10 players per squad; not over 20 water boys with wet towels per team; no substitutions allowed during the first two minutes of competition; no physical or verbal abuse directed to officials, except when necessary. A capacity crowd is anticipated.

Los Alamos Bridge Wins Honorable Mention

The Los Alamos Canyon Bridge, built last year, has received honorable mention in the Annual Aesthetic Bridge Competition conducted by the American Institute of Steel Competition, it was announced by AEC officials. The bridge was erected to carry traffic between Los Alamos Mesa and South Mesa where the University of California is constructing its new permanent technical area.

what's doing

BIEN DICHO TOASTMASTERS CLUB: Luncheon meetings 12:05 p.m., Mondays, South Mesa Cafeteria. For information call William Pracht, 672-1920.

SIERRA CLUB: Luncheon meetings at noon, first Tuesday of each month, South Mesa Cafeteria. For information call Brant Calkin, 455-2468, Santa Fe.

RIO GRANDE RIVER RUNNERS: Meetings scheduled for noon, second Friday of each month at South Mesa Cafeteria. For information call Jon Cross, 662-7521.

LOS ALAMOS SAILORS: Meetings at noon, South Mesa Cafeteria, first Friday of each month. For information call Dick Young, 662-3751.

SPORTS CAR CLUB DEL VALLE RIO GRANDE: Meetings, 7:30 p.m., Hospitality Room, Los Alamos National Bank, first Tuesday of each month. For information call Gerry Strickfadden, 672-3664 or Frank Clinard, 662-4951.

PUBLIC SWIMMING: High School Pool—Monday through Wednesday, 7:30 to 9:30 p.m., Saturday and Sunday, 1 to 5 p.m. Adult swim club, Sunday, 7 to 9 p.m.

LOS ALAMOS VOLLEYBALL CLUB: Mondays, Girls' gym, Los Alamos High School. Men—6-7:30 p.m.; Women—8-9:30 p.m. For information call Don Shepard, 662-7865.

NEWCOMERS CLUB: Dec. 9, 9 p.m.-1 a.m., Elks Club, Christmas dance. For information call Linda Hertrich, 662-9355.

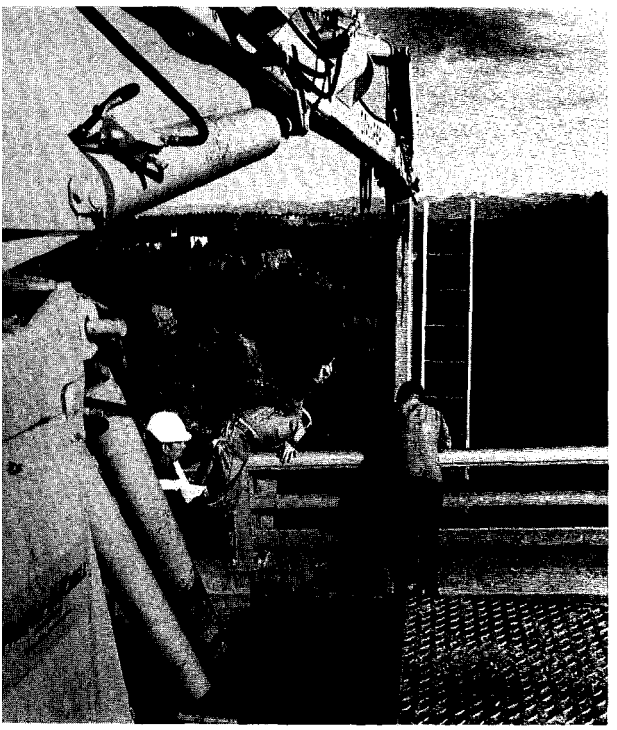
MOUNTAIN MIXERS SQUARE DANCING CLUB: Mesa School, 8 p.m. For information call Ruth Maier, 662-3834.
Dec. 2—Dick Siebenforcher, Albuquerque
Dec. 16—Wayne Moyer, Albuquerque
Dec. 31—Dean Yount, Santa Fe

OUTDOOR ASSOCIATION: No charge, open to the public. Contact leaders for information.
Dec. 10—Bandelier Loop trip, Ken Ewing, 662-7488
Dec. 14—Noon meeting, South Mesa Cafeteria, Reed Elliott, 662-4515

MESA PUBLIC LIBRARY:
Dec. 7-Dec. 26—"Sparky's Tips for Safe Holidays" (display)
Dec. 27-Jan. 25—"Pequeños" (little things), Erma Heidlebaugh

LASL Director Harold Agnew talks with Brigadier General Ray Sitton and seven members of Sitton's staff during the Air Force group's recent visit to the Laboratory. Sitton is assistant deputy chief of staff for plans, Strategic Air Command.

Henry T. Motz
3137 Woodland
Los Alamos, New Mexico 87544



To provide inspectors with more convenient access to the underside of the bridge over Los Alamos Canyon, a "Snooper" truck was rented from the State of New Mexico. The Snooper is a truck-mounted, double-jointed, hydraulically operated, steel arm whose "hand" is a platform large enough for a man to stand on while inspecting upper members of the bridge. The communications link between the inspector on the platform, right, and the Snooper operator is a workman, above, who, while leaning over the guard rail, relays messages to the operator via hand signals. The inspection is being conducted by Howard, Needles, Tamen and Bergendoff of Kansas City in compliance with recent federal regulations which call for periodic routine inspections of bridges throughout the country.